

Soil Conservation Service

7 South Main Executive Plaza Suite 104 Tooele, Utah 84074

July 21, 1986

Jim Lake Lone Star 615 West 8th South P. O. Box 1469 Salt Lake City, Utah 84110

Dear Jim,

In response to your request, as per our visit to the "Antone Clay Quarry" today, is a summary of my findings and recommendations for reclaiming the disturbed area.

The upper shallower soil has an excellent stand of Bluebunch Wheatgrass and Sandberg Bluegrass. Further down the slope where the soil is deeper, the bluegrasses along with Sagebrush are the main plants. Cheatgrass, Needle and Thread and Threeawn grass are the main plants.

I would recommend you continue to stock pile as much of the top soil as possible, preferably, the top 6-8" to be used later to topdress disturbed areas where practical. The top soil has organic matter that is needed for a good reclaimation project. Wherever possible slopes on cuts and trenches should be reshaped to a 2:1 slope or greater.

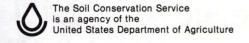
Steep slopes should be broadcast seeded with Bluebunch Wheatgrass, 8#/ac, and Crested Wheatgrass (preferably Hycrest) 6#/ac and 1#/ac Sweet Clover PLS (Pure Live Seed). Cover the seed with a drag or by hand raking. The road areas should be drilled with crested Wheatgrass 8#/ac and 1#/ac Sweet Clover PLS on a clean, firm seedbed. Roads should be ripped up and a firm seedbed prepared. Seeding will be done in late fall before snow cover is on the ground.

Attached is a "Range Condition Record" I filled out for your use.

Carlos Garcia, SCS, Tooele, Ut 84074

Carlas Laccas

attachment





## RANGE CONDITION RECORD

USDA
Soil Conservation Service
Write-up No. /

	Site Name Upland 9	ravell	4 100	am		Ranch Lone Star Profile No.			
	Site Name Upland gravelly loam Soil Taxonomic Unit Abela Loam Elevation 4800 - 4900 Exposure East Field Office Tooele Location			Vegetative Aspect					
				on: T. 25 R. 6 W Sec. 7817/8/74 1/4	n: T. 25 R. 6 W Sec. 7817/474 1/4				
	Range Conservationist:	1-1	15			Date: 7-21-86			
		ano	2/5	any					
(1)	(2)	(3)	(4)	(5)	(6)	CONDITION CLASS INDICATORS:			
		1	×	5	0	Evaluate each indicator in relation to clim	la Y		
		se.	ma.	200	Weighted PUF	for the site. (Circle those that apply).			
		w.t.	¥ -1	pe	gh				
Plant		2	2	ro	le i	% Climax   Accelerated   Population   % Plant   Cond   Vegetation   Erosion   Density   Diversity   Ra	ting		
Group	Common Plant Names	1 2	100 11	100	134		Ment		
Ints	Cheatgrass	15		1	1	100-76   None   3/4 to full 100-76   (Cli	max1		
fue -	13/46 bunch wheatgrass	120	-	1	-	T 75-51   Active   1/2 to 3/4   75-51   (Late	sera)		
and	Sanbory blue gross	17	-	1	<u> </u>	Moderately			
s a	Bottle brush Squireltail	1-	<u> </u>	i	i	50-26   Active   1/4 to 1/2   50-26   (Mid	seral)		
S		17	i -	i	i -	T 25-0   Active   0 to 1/4   25-0  [Ear]	y sera		
as -	Pecale and thread	10	<u> </u>		İ	TREND INDICATORS:			
Gr.	Three awn	110	İ	Ì	Ī	T Plant Vigor: good			
ra.	nree awn	T				T chartes	reach		
68 3		T	1	1	1	Seedlings and young plants: some new plants			
		1	1		I	Litter and mulch:			
	F. llerie	12		I		See Mades of coll confocus			
	prickly be three	2				T Condition of soil surface:			
	Sunflower	1-				Apparent Trend: Improving Declining Static  EROSION COMPUTATION DATA			
s .	Thiste	11		1	1				
Weeds	will orion	T		-	<del> </del>	- Bare Ground - 25 %			
	47. St. Flower Jego Killy	7		1	<del> </del>	Surface Fragments 2 = 100%  Ground Cover 5 %  (Litter and vegetation within 1 inch of soil surfa			
or.	Fstragulus U	1	<del></del>	<del> </del>	<del></del>	[Litter and vegetation within 1 inch of soil surfa	ce)		
	I phlox	1	†	i -	<u> </u>	Height of canopy: 0 0.5m 2m 4m			
Forbs	Pariox	†	†	İ	T	T Canopy Cover: 0 25% 50% 75%			
Ð.		T	T		T	Slope Slope Length ft.			
			1	T		TR K LS C T			
5				1					
		1				Wind Erosion Data: Climate Soil WEG Unsheltered distance Veg. Cover			
	Big Sagebrush	120		1	1		, , , ,		
	fiftlet yellowbrush	10	<del> </del>	1	<del> </del>	Soil Loss (sheet and rill) tons/ac Soil Loss (gully erosion) tons/ac			
	Juniper	1	<del> </del>	<u> </u>	<del> </del>	Soil Loss (wind) tons/ac	re/yea		
		<del>i</del>	İ	İ	i	USE DATA			
	İ		1	1					
35		T				Use History: Kind of Animal:			
Shrubs		1				Season of Use:			
Sh						Burning History:			
			1	1	!	Present Utilization 2 of			
and		<del>                                     </del>	-	<u> </u>	1	(key species)			
5		+	<del> </del>		<del></del>	Estimated Utilization Efficiency:%			
Trees		+	-	-	i	Notes:			
Η .		<del> </del>	<del>                                     </del>		i -				
		<del>                                     </del>	i	İ	T	To a final section of the section of			
	İ	†	T	1	Γ	T .			
35		T		T	T <sub>i</sub>	T Sail Clay			
		<u> </u>				I Si . 5/20			
100	TOTAL				1	Si 51%  1 22-27%			
	Total Annual Yield		Ibs/A	c. ai	r-dry	21-21/9			
	(Understory if woodland)								



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7 South Main Executive Plaza, Suite 104 Tooele, Utah 84074

December 18, 1986

R. K. Kronstadt 2812 Kentucky Avenue Salt Lake City, Utah

Dear Mr. Kronstadt,

In response to your telephone request for supplemental information on the Antone Lake Shale Quarry Rehabilitation Project, as per our discussion:

- Generally, if adequate top soil is stock-piled to cover the spoil area no fertilizer is needed to insure the success of seeding. Since the recommended seeding will be in the late fall, very little benefit would be derived from the application of nitrogen fertilizer.
- 2. Ladac or Spreader II Alfalfa @ 2 Lb./ac. Pure LIfe Seed is recommended over Yellow Sweet clover.
- 3. Highcrest or Ephraim crested wheatgrass @ 7 lb./ac. Pure Life Seed is recommended if available over Common crested wheatgrass.
  Please note to double the seeding rate if seeding is broadcast.

Please call me at 882-2276 if you have any questions.

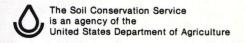
Jascinfo

Carlos Garcia

Soil Conservationist

cc: Joe Urbanik

Tooele County Planning Commission





## # 26 Reclamation Schedule

- A. No construction in necessary
- B. 15 days
- C. 5 years
- D. Refer to #27 reference #

#27 Estimated Costs for Reclamation Schedule

<u>Item</u>	Description	Days	Est. Cost*	Equipment
A)	Cleanup/removal of structures	1	\$ 1,800	Dryer/Loader
В)	Backfill, grading contourint	5	12,000	Dozer/Loader grader
C)	Topsoil redistribution	2	1,600	Loader
D)	Revegetation	3	3,000	Tiller, disc Tractor
E)	Labor	-		(included A-D)
F)	Fencing/Safety	3	5,061	Tractor
G)	Reseeding	1	1,000	Tractor, tiller seeder
	Total	15	\$24,461	

Note: 1) Cost estimate is based on current hourly rates for dozer (\$125), loader (\$100), grader (\$125). Revegetation equipment (\$125). Fencing \$2 per ft. x 2500' + signs.

<sup>\*</sup> Reference: Caterpillar handbook, edition 12.

## QUARRY ANTONE MINING SEQUENCE

Area	Use	Years	≈ Tons/Yds
1	Mining	1985-86	60 K +
2	Topsoil storage	-	2,200 yds <sup>3</sup>
3	Stockpile	-	<b>-</b>
4	Mining	1987-89	150K +
5	Stockpile		
6	Topsoil storage	<u>-</u> -	4,400 yds <sup>3</sup>
7	Mining	1990-92	150K +

## Acreage Distrubed

Area 1 + 2 + 3	8	2.79 acres.
Area 4 + 5 + 6	36	5.75 acres
Area 7	~	4.77 acres